TECHNOLOGY IS NOW FOR EVERYONE

WEB BASED

D-500

The D-500 is an advanced genset controller capable of every possible communication and functionality

FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- Synchroscope & check synch
- Allows closed transfers
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- Inputs expandable to 40
- 8 configurable digital outputs
- Outputs expandable to 40
- 4 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual “speed fine adjust” on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem & ethernet diagnostics
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring ethernet & GPRS
- Mobile genset support
- Automatic GSM geo-location
- GPS connectivity (USB&RS232)
- Dynamic DNS support
- Easy USB firmware upgrade
- IP65 rating with standard gasket

MEASUREMENTS

- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVAr, pf
- Engine speed
- Battery voltage

COMMUNICATIONS

- *Ethernet (10/100Mb)*
- *4-band GPRS modem (optional)*
- *USB Host & USB Device*
- *RS-485 (2400-115200baud)*
- *RS-232 (2400-115200baud)*
- *Micro SD card slot*
- *J1939-CANBUS*
- *Geo-locating through GSM*
- *GPS support (USB & RS-232)*
- *Embedded web server*
- *Web monitoring & programming*
- *Internet Central Monitoring*
- *SMS message sending*
- *E-mail sending*
- *Free PC software: Rainbow Plus*
- *Modbus RTU & Modbus TCP/IP*
- *SNMP (with TRAP messages)*
- *SNTP*

FUNCTIONALITIES

- *AMF unit (uninterrupted transfer)*
- *ATS unit (uninterrupted transfer)*
- *Remote start controller*
- *Manual start controller*
- *Engine controller*
- *Remote display panel*
- *Harmonic analysis of V & I*
- *Internal battery (optional)*
- *Long term data record on flash*
- *Input & output extension*

TOPOLOGIES

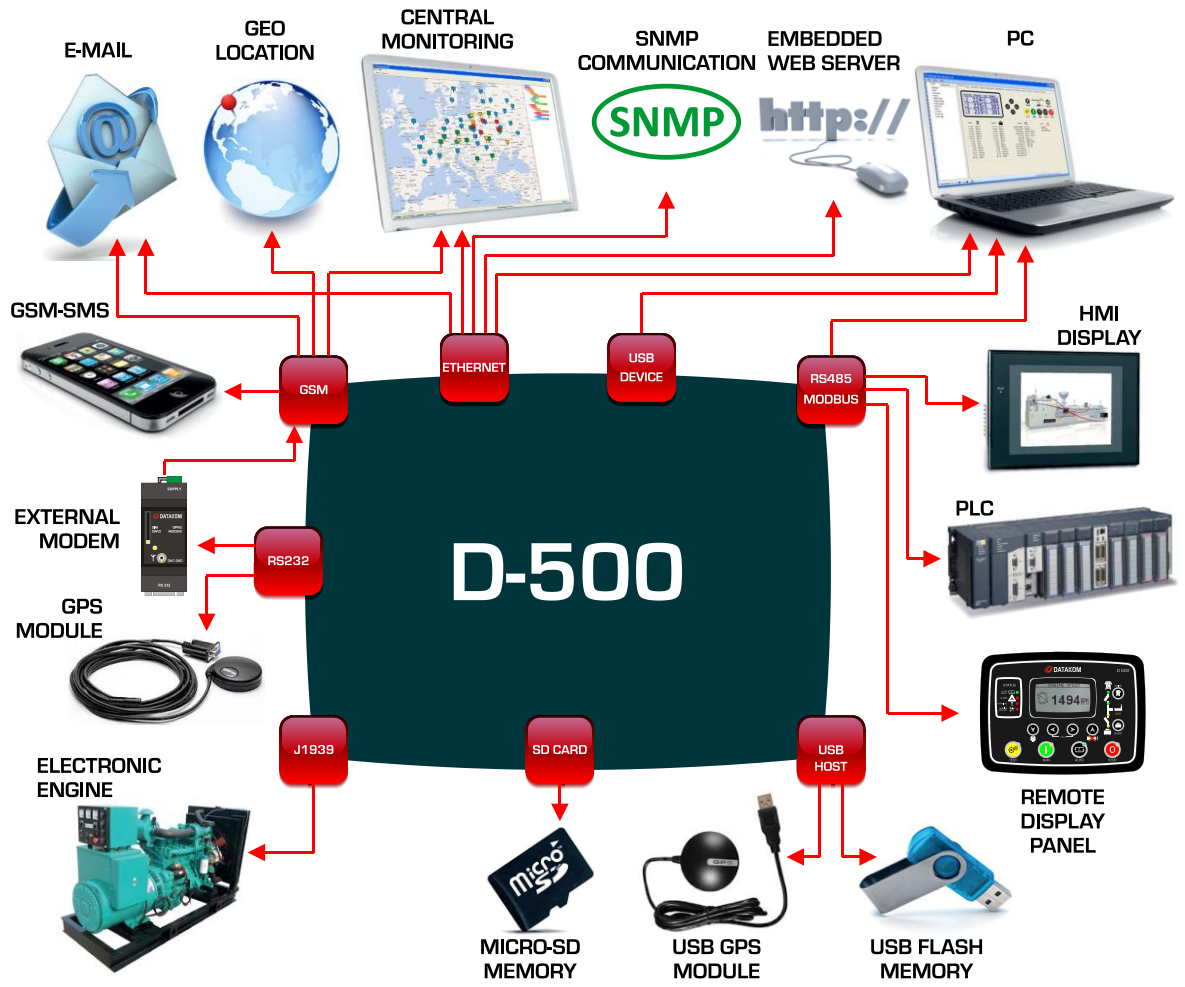
- *3 ph 4 w, star & delta*
- *3 ph 3 w, 2 CTs*
- *2 ph 3 w*
- *1 phase 2 wires*

nqa. ISO 9001 Registered

UKAS QUALITY MANAGEMENT 015

DATAKOM

COMMUNICATIONS



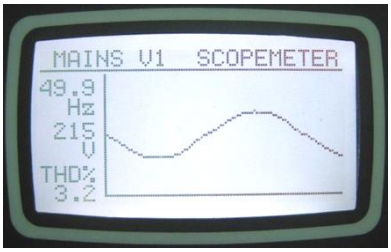
TECHNICAL SPECIFICATIONS

Alternator voltage: 0 to 300 V-AC (Ph-N)
Alternator frequency: 0-600 Hz.
Mains voltage: 0 to 300 V-AC (Ph-N)
Mains frequency: 0-600 Hz.
Topology: 1-2-3 phases, with or without neutral
DC Supply Range: 8.0 to 36.0 V-DC.
V-A-cos Accuracy: 0.5% + 1 digit
kW-kVA-kVAr Accuracy: 1.0% + 1 digit
Current consumption: 500 mA-DC max.
Current Inputs: from current transformers. ../5A.
Digital inputs: input voltage 0 to 36 V-DC.
Analog input range: 0-5000 ohms.
Mains and genset contactor outputs: 16Amps@250V
DC Outputs: Protected mosfet semiconductor outputs, rated 1Amp@28V-DC
Cranking dropouts: survives 0V for 100ms.
Magnetic pickup voltage: 0.5 to 50Vpk.
Magnetic pickup frequency: 0 to 20000 Hz.
Charge Alternator Excitation: 2W.
Display Screen: 2.9”, 128x64 pixels
Ethernet Port: 10/100 Mbits
USB Device: USB 2.0 Full speed
USB Host: USB 2.0 Full speed
RS-485 Port: selectable baud rate (2400-115200baud)
RS-232 Port: selectable baud rate (2400-115200baud)
Operating temperature: -20°C to 70°C (-4 to +158 °F)
Storage temperature: -40°C to 80°C (-40 to +176°F)
Maximum humidity: 95% non-condensing.
IP Protection: IP65 from front panel, IP30 from the rear (with gasket)
Dimensions: 200 x 148 x 46mm (WxHxD)
Panel Cut-out Dimensions: 176 x 121 mm minimum.
Weight: 450 g (approx.)
Case Material: High Temperature, non-flammable ABS/PC
Installation: Flat surface mounting on a Type 1 enclosure. Rear retaining plastic brackets.

CONFORMITY

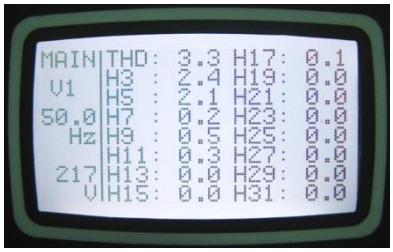
EU Directives Conformity
-2006/95/EC (low voltage)
-2004/108/EC (electro-magnetic compatibility)
Norms of reference:
EN 61010 (safety requirements)
EN 61326 (EMC requirements)
UL & CSA Compatibility:
• UL 6200, Controls for Stationary Engine Driven Assemblies (File# - 20140725-E314374)
• CAN/CSA C22.2 No. 14-13 – Industrial Control Equipment

WAVEFORM DISPLAY & HARMONIC ANALYSIS



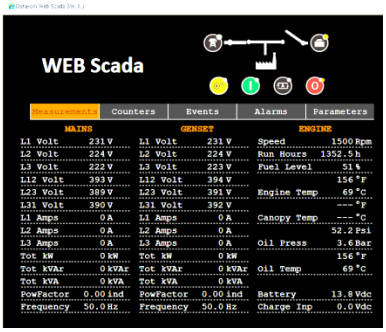
Waveform Display

Graphical Harmonics

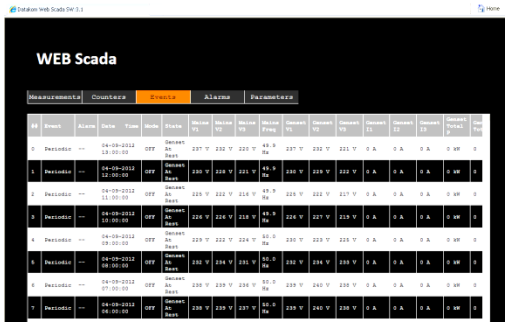


Digital Harmonics Display

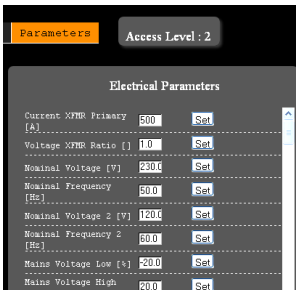
WEB SERVER



Monitoring and Control

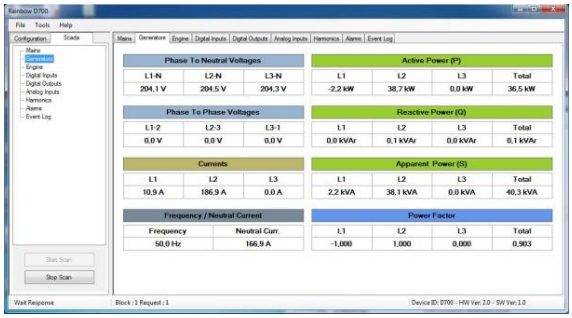


Event Log Display

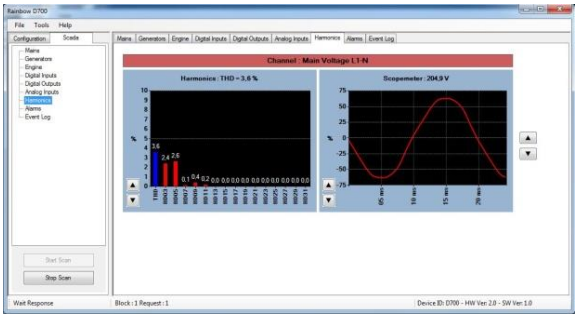


Web Programming

RAINBOW PLUS PROGRAM

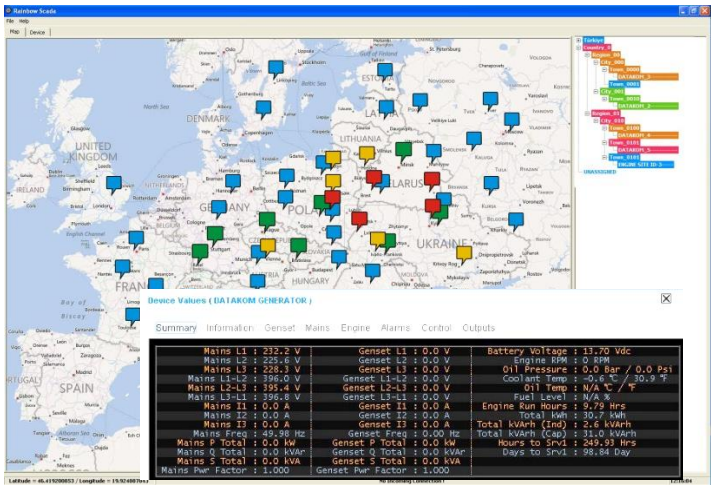


Scada Screen



Waveform display & Harmonic Analysis

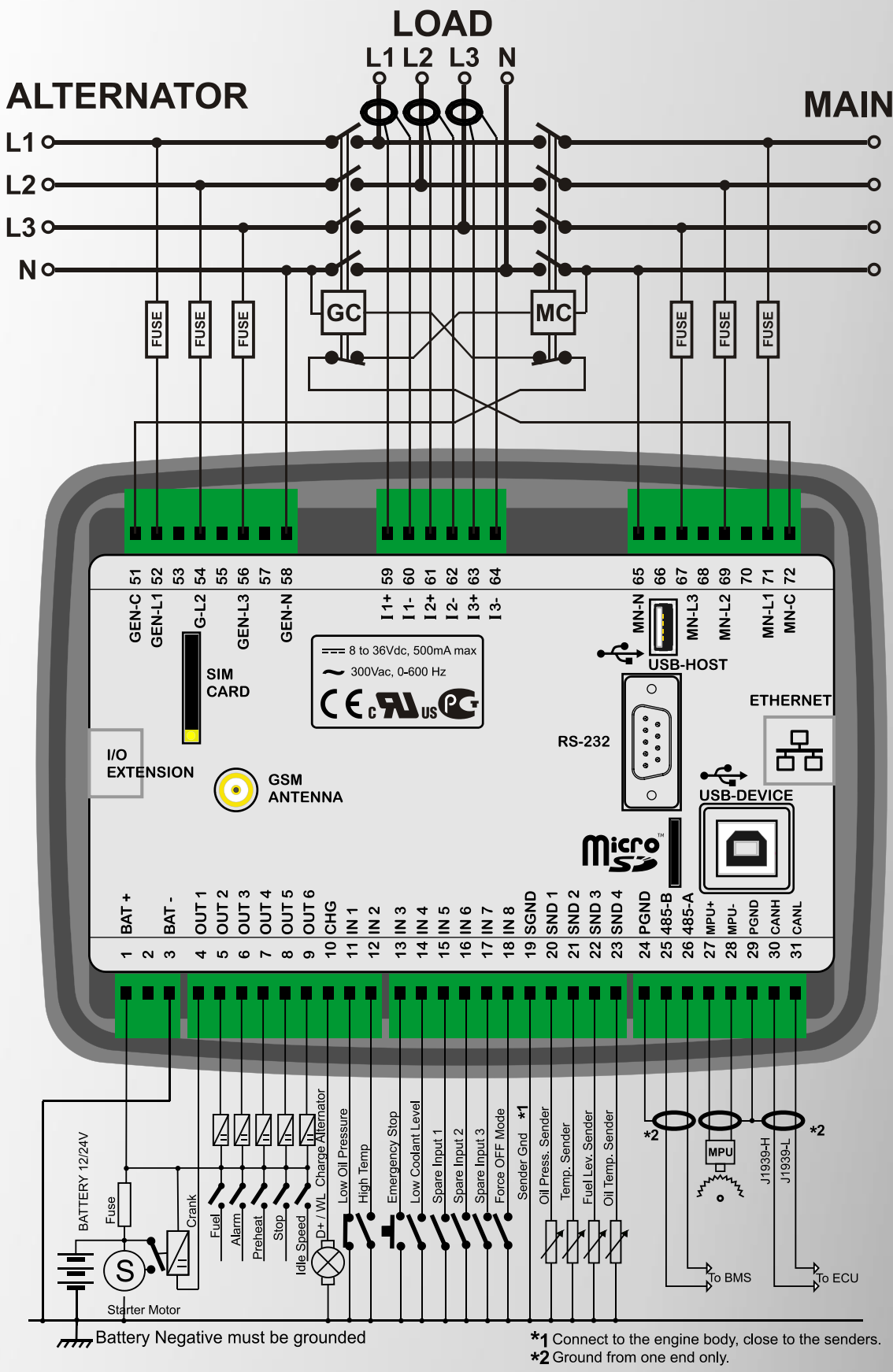
RAINBOW SCADA CENTRAL MONITORING



Fleet Display on Map, online monitoring

Smartphone Support

TYPICAL CONNECTIONS



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